

ENVIRONMENTAL PROTECTION

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Dechlorinator Station

In January 1997, ORNL received approval from the State of Tennessee to commence operation of an injection-system dechlorinator located in the 6000 area. All of the once-through process cooling water in the 6000 area is routed through the dechlorinator and then discharged to White Oak Creek. The National Pollutant Discharge Elimination System (NPDES) Permit for ORNL specifies concentration limits of 0.019 mg/L chlorine, daily maximum, and 0.011mg/L monthly average, at ORNL monitoring points. The current Tennessee Department of Environment and Conservation (TDEC) required detection level (RDL) for chlorine is 0.50 mg/L. Unless a lower RDL is promulgated by TDEC, the RDL of 0.50 mg/L is the instream chlorine limit.

On December 8, 1997, the controller for the dechlorinator station failed, causing a release of chlorinated water that resulted in an "aquatic species mortality incident," or "fish kill," and an associated Occurrence. A total of 1720 dead aquatic organisms, including minnows and salamanders, were collected from White Oak Creek over a period of three days following the incident. The controller was subsequently repaired, emergency response notification policies improved, and an extra backup unit obtained to mitigate future malfunctions.

Sink and Drain Survey

Pursuant to Federal Court Order No. 3:92-cv-0036 (Order), issued September 26, 1996, ORNL was required to complete a comprehensive survey of all pipes, sinks, and other connections to ORNL storm drain systems within one year of the issuance of the Order (i.e., by September 26, 1997). The Order further stipulates that during the course of the survey or at any time thereafter, sources found to be inappropriately connected to a storm drain system must be immediately placed under administrative control and the sources plugged, disconnected, or rerouted within 10 days of their identification as inappropriately connected sources. In addition, since this is a permanent court order, ORNL must routinely verify and update, as necessary, the sink and drain information. The Physics Division has updated the ORNL Sink and Drain Survey annually, as required. New sources of once through cooling water in the 6000

area need to be evaluated to ensure that the treatment capacity of the dechlorinator station is not exceeded.

Stack and Vent Survey

The Clean Air Act Amendments of 1990 require the EPA and the states to implement an operating permit program for certain air emission sources. The "Title V" permit will resemble the NPDES permit; a single air permit will describe numerous emission points. This permit will simplify some aspects of compliance by consolidating all air pollution control requirements into a single document. Other compliance requirements will increase. Specifically, better documentation for small, insignificant emission sources will be required. To prepare for implementation of the Title V permitting program and in response to increased requirements to document "insignificant activities," the ORNL Clean Air Act Group conducted a site survey of air emission points and sources. This survey collected data needed to document the compliance status of numerous small emission sources and their emission points. This data is maintained in the Stack and Vent Survey on the WWW and includes a set of roof diagrams locating emission points, a set of schematic diagrams for ventilation systems, and a database file containing descriptive information. Additionally, the Stack and Vent Survey is used to provide data for the annual Radioactive National Emissions Standards Hazardous Air Pollutants (NESHAP) report and for the Spill Prevention Control and Countermeasures (SPCC) Plan. The Physics Division has updated the ORNL Stack and Vent Survey annually, as required. New sources of emissions must be evaluated to ensure that permit requirements are adhered to. Additionally, logbooks must be maintained for sources of insignificant emissions; such as hoods, gloveboxes, and ultrasonic cleaners, to substantiate the exempt status of these sources.